

CMX® Autoconform

NS-03-0790

Overview

This section introduces you to CMX®

Autoconform, software that converts CMX lists into New England Digital sequences.

About Autoconform

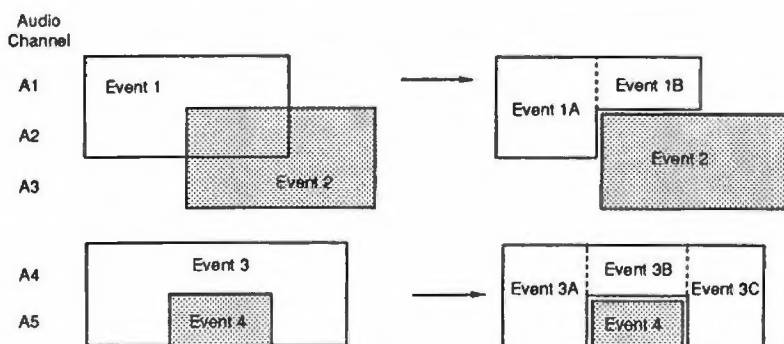
The Autoconform software converts an existing CMX list into an Edit Decision List (EDL), records required audio from source reels onto the Direct-to-Disk and assembles the audio into a sequence that conforms to the CMX list.

Displaying Autoconform

Autoconform is displayed in a separate window and has a set of pulldown menus that appear in the menu bar at the top of the screen when the module is active. To open Autoconform from the Finder, double-click the Conform icon. CMX files which have already been converted to EDL files appear in the dialog. Double-click one to open it.

If you want to open a CMX file which has not been converted to an EDL, click Cancel, and select Open CMX... from the File menu. Insert a 3.5" CMX disk. (You must select Open CMX... *before* inserting the disk.) The file you select from the dialog is converted into an EDL which appears in the Autoconform window. The EDL filename automatically corresponds to the CMX filename.

When reading a CMX list into an Autoconform EDL, the system automatically cleans the list and eliminates unneeded events. If audio overlaps, an event may be separated into multiple events.



The Autoconform window

The **Title** is the same title that appears in the CMX project.

During recording, the current time code location on the source machine appears. During conforming, the current sequence time is displayed.

Example File

Title: Example EDL Time: 00:00:00:00

Stat	Reel	Stat	Event	Dest Tracks	Source In	Source Out	Destinati
<input checked="" type="checkbox"/>	All Reels	<input checked="" type="checkbox"/>	001		10:00:00:29	10:00:03:29	01:1
<input checked="" type="checkbox"/>	REEL 1	<input checked="" type="checkbox"/>	001	1	10:00:00:29	10:00:03:29	01:1
<input checked="" type="checkbox"/>	REEL 2	<input checked="" type="checkbox"/>	002		01:00:07:01	01:00:09:01	01:1
<input type="checkbox"/>	REEL 3	<input checked="" type="checkbox"/>	002	1,2	01:00:07:01	01:00:09:01	01:1
<input type="checkbox"/>	REEL 4	<input checked="" type="checkbox"/>	003		01:00:10:16	01:00:15:11	01:1
<input type="checkbox"/>	AX	<input type="checkbox"/>	003	1,2	01:00:10:16	01:00:15:11	01:1
		<input type="checkbox"/>	004		01:00:15:11	01:00:16:11	01:1
		<input type="checkbox"/>	004	3,4	01:00:15:11	01:00:16:11	01:1
		<input type="checkbox"/>	004	3,4	01:00:16:11	01:00:17:26	01:1
		<input type="checkbox"/>	004		10:00:03:29	10:00:08:29	01:1
		<input type="checkbox"/>	004	4	10:00:03:29	10:00:08:29	01:2
		<input type="checkbox"/>	005	4	10:00:08:29	10:00:10:09	01:2
		<input type="checkbox"/>	006		10:00:00:00	10:00:05:00	01:2
		<input type="checkbox"/>	006		10:00:00:00	10:00:05:00	01:2

Status messages appear during recording and conforming.

The reel list indicates all the source reels included in the EDL.

The EDL lists the events requiring audio from the selected source reel. If "All Reels" is selected, the entire EDL is displayed.

To specify what information is displayed in the EDL, choose **Preferences...** from the **Window** menu and select the desired options. The selected sort field is underlined in the EDL. Select the video format that was used when the source reels were created.




Set Default saves these preferences as your default setting for the current EDL file. **Revert** recalls the current default settings at any time.

The reel list

To select a source reel, click its name in the reel list. Events required from the selected reel appear in the EDL. When **All Reels** is selected, the entire EDL is displayed.

If the list of reels extends beyond the bottom of the window, use the scroll bar adjacent to the list to display other reels.

The status box next to the reel name indicates whether audio on that reel has been recorded onto the Direct-to-Disk. A reel can have one of three status states.

Status Box State	Meaning
	None of the required audio from the source reel has been recorded into the current project on the Direct-to-Disk.
	All of the required audio from the source reel has been recorded into the current project on the Direct-to-Disk.
	Some of the required audio from the source reel has been recorded onto the Direct-to-Disk. This status appears during recording, when you abort recording or when changes to the EDL require new audio from a previously-recorded source reel.

The EDL

Use the vertical scroll bar at the far right of the window to scroll through the list of events in the EDL. Use the scroll bar at the bottom to scroll through event information.

The status box next to each event indicates whether the audio associated with that event has been recorded.

You can select one or more events for recording or conforming.

- To select an event, click its event number.
- To select all the events between two events, either drag from one event number to the other or press and hold the Shift key while you click the two event numbers.
- To select a group of non-contiguous events, press and hold the ⌘ key while you click each desired event number.

You can disable events to prevent them from being recorded or conformed. Select the event(s) you want to disable, and then choose **Disable Selected Events** from the Events menu. A horizontal line appears through each disabled event. All events are automatically enabled whenever an EDL file is opened.



Overview (con't)

Editing track assignments

The column labeled **Dest Tracks** lists the Direct-to-Disk tracks on which the cues are recorded.

By default, the destination track numbers are the same as the source channel numbers. For example, all mono events on source channel 2 will be recorded onto Direct-to-Disk track 2. For a multichannel event, all relevant tracks are listed.

Before recording, you can manually edit a selected track assignment by typing a new value or by using **Cut**, **Copy** and **Paste** from the Edit menu. Two or more track numbers must be separated by a comma.

Press  to edit the track assignment of the next event, or  to edit the track assignment of the previous event.

You can edit track assignments automatically by using the checkerboard feature.

Checkerboarding

Checkerboarding separates events from one source channel onto two or more destination tracks. Select the desired reel and then select **Checkerboard Events...** from the Events menu. (If any events of the currently displayed reel are selected, the menu item becomes **Checkerboard Selected Events...** and checkerboarding will affect only those events.) To checkerboard the events of all reels in the EDL, select **All Reels** before selecting the checkerboard command.

In the Checkerboard dialog, select the source channel(s) whose events you want to separate. In the column labeled **Dest Tracks**, enter the range of destination tracks for each selected channel. The following examples illustrate various track assignments.

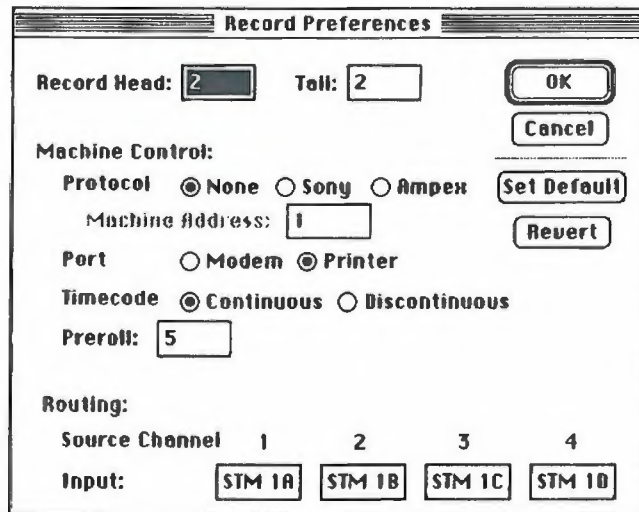
Source Channels	Dest Tracks		Separates events onto Direct-to-Disk tracks
	First	Last	
<input checked="" type="checkbox"/> 1	1	3	1 & 2 & 3
<input checked="" type="checkbox"/> 2	3	1	3 & 2 & 1
<input checked="" type="checkbox"/> 3	3	3	3
<input type="checkbox"/> 4	3	1	not separated
<input checked="" type="checkbox"/> 1,2	1	6	1,2 & 3,4 & 5,6
<input type="checkbox"/> 1,3	1	6	not separated
<input checked="" type="checkbox"/> 1,4	6	1	5,6 & 3,4 & 1,2
<input checked="" type="checkbox"/> 2,3	5	6	5,6
<input checked="" type="checkbox"/> 2,4	6	5	5,6
<input type="checkbox"/> 3,4	6	5	not separated

Note that two-channel events require an *even* number of destination tracks. The destination tracks are adjacent, regardless of whether the source channels are. The lowest source channel is automatically assigned to the lowest track of each destination pair.

Set Default saves these track assignments as your default setting for all EDL files. **Revert** recalls the current default settings at any time.

Recording preferences

Before recording source audio to the Direct-to-Disk, you can set a number of options by selecting **Record Preferences...** from the **Record** menu.



The **Record Preferences** dialog box contains the following settings:

- Record Head:** 2
- Tall:** 2
- Machine Control:**
 - Protocol:** ☒ None ☐ Sony ☐ Ampex
 - Machine Address:** 1
 - Port:** ☐ Modem ☒ Printer
 - Timecode:** ☒ Continuous ☐ Discontinuous
 - Preroll:** 5
- Routing:**

Source Channel	1	2	3	4
Input:	STM 1A	STM 1B	STM 1C	STM 1D

Buttons: **OK**, **Cancel**, **Set Default**, **Revert**

It is important to set the appropriate **Machine Control** options. Make sure you select the Macintosh port that is connected to the source machine (*not* the port connected to the Direct-to-Disk).

WARNING: If you plan to record with discontinuous timecode, you must select the **Settings** command on the **Sequence Editor Display** and set **SMPTE Resync** to **ON** *before* you set the timecode option in the **Record Preferences** dialog box.

Set Default saves these preferences as the default for all EDL files. **Revert** recalls the current default settings at any time.

Option	Meaning
Record Head/Tail	Indicates the number of seconds of additional audio recorded before and after each event.
Machine Control	
Protocol	
None	Control of source machine is disabled. The reel can either be played from start to finish or shuttled by hand.
Sony	The reel autolocates using the Sony BVH machine control protocol.
Ampex	The reel autolocates using the Ampex VPR3 machine control protocol. In the Machine Address field, enter the address number of the machine you want to control.
Port	
Modem	The machine control cable is connected to the Macintosh modem port.
Printer	The machine control cable is connected to the Macintosh printer port.
Timecode	
Continuous	The system expects continuous ascending time code within a 24-hour clock matching the EDL.
Discontinuous	The system expects discontinuous ascending time code within a 24-hour clock starting at a specified time and matching the EDL.
Preroll	Indicates the number of seconds allowed for the tape machine to reach speed.
Routing	Available inputs appear on pop-up menus. Select the Direct-to-Disk input you are using for each source channel.

Recording preferences

Recording

Reels are recorded onto the Direct-to-Disk one at a time. If **All Reels** is selected, the entire EDL is displayed but the record commands are unavailable.

- To record an entire reel to the Direct-to-Disk, select the desired reel and then select **Record Reel** from the Record menu.
- To record only the events you have selected in the EDL, select **Record Selected Events** from the Record menu.
- To record all *except* the selected events, select **Disable Selected Events** from the Events menu before recording.

Recording begins when the timecode of the next required source event is reached. If machine control is in use, the source machine automatically locates to the appropriate event on the reel.

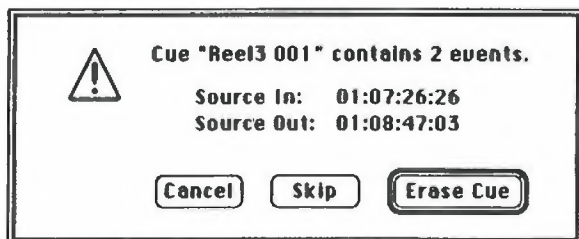
Whenever the reel reaches a break in the timecode while recording, the Direct-to-Disk stops recording and saves a cue. Multiple events with consecutive source times may be recorded as a single cue.

Cue names are automatically assigned to each recorded event and are listed in the Cue Directory. The cue name consists of the reel name followed by a space and a three-digit take number, unrelated to the source event number (e.g., REEL2 013). A letter after the take number (e.g., REEL2 013A and REEL2 013B) indicates that several cues were created from one cue because part of the cue was recorded on some tracks and part on others.

WARNING: The cues in the Cue Directory are synced to the source reel. To preserve the synchronization when the EDL is conformed, do not modify or resave cues that you want to conform.

Erasing audio

After recording, you can erase selected cues from the Direct-to-Disk tracks. In the EDL, select the event(s) whose audio you want to erase, and select **Erase Audio...** from the Record menu.



The dialog indicates the name of the cue to erase, how many source events are contained in the cue, and the Source In (and Out) time of the first (and last) event in the cue.

Button	Function
Erase Cue	Deletes the cue from the Direct-to-Disk. If the number of events in the cue is more than 1, audio from several source events is erased.
Skip	Leaves the cue intact and displays the dialog for the next selected event.
Cancel	Closes the dialog box without erasing the cue.

Conforming

Once the cues have been recorded onto the Direct-to-Disk, you can conform them into a sequence. Before conforming, you can specify which sequence track will receive video events by selecting **Conform Preferences...** from the Conform menu.

- To create a sequence, select **Conform Audio** from the Conform menu.
- To conform only the events you have selected in the EDL, select **Conform Selected Events** from the Conform menu.
- To conform all *except* the selected events, select **Disable Selected Events** from the Events menu before conforming.





The previous sequence is automatically erased before conforming. The conformed sequence contains only the audio events which have been recorded to the Direct-to-Disk as cues and the video events.

To conform an event, the destination tracks listed in the EDL must be the same as the Direct-to-Disk tracks on which the event was recorded. Each multitrack event is listed on the lowest corresponding sequence track.

You can use either EditView or the Event List Editor panel of the Audio Event Editor to edit the resulting sequence. The **Event Start** time of each event in the sequence is the same as the **Destination In** time of the corresponding event in the EDL. The caption for each sequence event includes the CMX event number.

Motion controls

Use the following key equivalents to operate the sequencer **Motion Controls**. If machine control is turned on, the commands control the external machine.

Motion Control	Key Equivalent
Stop	
Play	
Fast Forward	
Rewind	

Menus

This section briefly describes each of Autoconform's menu commands.

File

Open...	⌘O
Open CMX...	
Close	⌘W

Save	⌘S
Save As...	

Close Conform	
Quit	⌘Q

File menu

Open..... opens a CMX list which has already been converted to an EDL file.

Open CMX... opens a CMX disk that has not yet been converted to an EDL file.

Close closes the current EDL file.

Save saves the current EDL file to disk. A previously-saved file has its changes saved; the Save As dialog appears for an untitled file.

Save As... lets you name and save an untitled file or rename a previously-saved file.

Close Conform closes Autoconform while remaining in the Real-Time Performance system.

Quit closes Autoconform and returns to the Finder.

Edit menu

Commands on the Edit menu are available only when editing destination track assignments.

Undo currently is not functional.

Cut removes the selection and places it on the Clipboard.

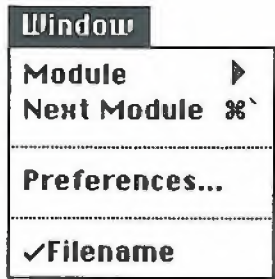
Copy places a copy of the selection onto the Clipboard.

Paste places the Clipboard contents into the selection.

Clear removes the selection without placing it on the Clipboard.

Edit	
Undo	⌘Z
<hr/>	
Cut	⌘H
Copy	⌘C
Paste	⌘V
Clear	

Menus (con't)



Window menu

Module lists available modules on a pop-up menu. Select the desired module from the menu.

Next Module selects the next module.

Preferences... lets you select display and sorting options for the EDL and specify the video format used to create the source events.

Filenames of open EDL files are listed. The current file is checked.

Events menu

Disable Selected Events prevents events from being checkerboarded, recorded or conformed.

Enable Selected Events allows events to be checkerboarded, recorded or conformed.

Checkerboard Events... lets you route source channels to a range of destination tracks.

Record menu

Record Reel begins recording audio from the selected reel onto the Direct-to-Disk. During recording, the command toggles to **Stop Recording**.

Record Selected Events begins recording only the selected events from a reel onto the Direct-to-Disk.

Erase Audio... lets you erase selected cues that have been recorded on the Direct-to-Disk tracks.

Record Preferences... lets you specify record head and tail amounts, machine control options and input routing.

Show History currently is not functional.

Record	
Record Reel	⌘R
Record Selected Events	
Erase Audio...	
Record Preferences...	
Show History	

Conform menu

Conform Audio creates a sequence that conforms to the EDL. Only cues on the Direct-to-Disk and video events are conformed. During conforming, the command toggles to **Stop Conforming**.

Conform Selected Events creates a sequence containing selected events of an EDL. Only cues on the Direct-to-Disk and video events are conformed.

Conform Preferences... lets you specify which sequence track will receive video events.

Conform	
Conform Audio	⌘A
Conform Selected Events	
Conform Preferences...	

Basic Autoconform techniques

This section explains how to perform common Autoconform functions.

Recording from a reel to the Direct-to-Disk

Before recording, you need to create or recall a Direct-to-Disk project. The preferred track mode during recording is CuePB. To avoid slowing down the system, erase any previous sequence.

1. Select **Preferences...** from the Window menu, and select the video format that was used when the source reels were created.
2. If you plan to use discontinuous timecode, select the **Settings** command on the Sequence Editor Display and set **SMPTE Resync** to **ON**.
3. Select **Record Preferences...** from the Record menu and set the appropriate options.
4. If desired, edit the destination track assignments in the EDL.
5. Click the name of the source reel you want to record.

The reel name highlights and the events of that reel are listed in the EDL.

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Recording from a reel to the Direct-to-Disk (con't)

6. If you want to record only some events on the reel, select the desired event(s).

The selected events highlight.

7. To record all enabled events of the reel, select **Record Reel** from the Record menu.

OR

To record only the selected enabled events, select **Record Selected Events** from the Record menu.

The appropriate events from the reel are recorded onto the Direct-to-Disk as cues. Status messages at the bottom left of the window indicate the progress of recording.

8. Repeat the procedure for other events or reels you want to record.

Note: To abort recording at any time, press **⌘**. or select **Stop Recording** from the Record menu.

**Basic
Autoconform
techniques (con't)**

Conforming the EDL into a sequence

Once the audio from the EDL has been recorded to the Direct-to-Disk, you can automatically conform it into a sequence. You can begin conforming before recording all the reels, but only the events recorded to the Direct-to-Disk will be conformed.

1. Select **Conform Preferences...** from the Conform menu, and specify which sequence track will receive video events.
2. Click the name of the source reel you want to conform.

The reel name highlights and the events on that reel are listed in the EDL.

3. If you want to conform only some events in the EDL, select the desired event(s).

The selected events highlight.

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Conforming the EDL into a sequence (con't)

4. To conform all enabled events of the reel, select **Conform Audio** from the Conform menu.

OR

To conform only the selected enabled events, select **Conform Selected Events** from the Conform menu.

A sequence that conforms to the EDL is created. Status messages at the bottom left of the window indicate the progress of conforming.

5. Repeat the procedure for other events or reels you want to conform.
6. You can use either EditView or the Event List Editor panel of the Audio Event Editor to display and edit the sequence.

Note: To abort conforming at any time, press **⌘**. or select **Stop Conforming** from the Conform menu.